of the color values of the pixels are determined in each sub-region. If the difference in a sub-region is greater than a predetermined tolerance threshold, the label "structure" is associated with the sub-region, and the label "color" is associated with the sub-region in the case that all differences in the sub-region are smaller than a predetermined tolerance threshold. The REAL image is compared with the desired color values in sub-regions with which the label color is associated based on the REAL color values. In sub-regions with which the label structure is associated, the average values or the sum of the amplitudes of all grey levels are determined and compared.

This method has proved itself well in practice. However, there are fundamental disadvantages. Individual pixels of the REAL image are compared with the parameters of a sub-region that, given the label structure, do not precisely describe the color property. The quality of this monitoring method depends very much on whether the morphology of the printed image randomly coincides with the arrangement of the sub-regions. Since the individual regions are predetermined fixed, in particular long, narrow or short and wide sections of an image which possess a specific color property are not precisely monitored since they extend over a plurality of sub-regions, and in each sub-region the monitoring parameters to be determined have only a fractional influence.

The invention is thus based on the object to achieve a method and a device for monitoring of print images with which the reliability and quality of the monitoring is significantly increased relative to conventional methods or, respectively, devices.

The object is achieved via the invention described in the independent claims. Advantageous embodiments of the invention are specified in the sub-claims.

The inventive method for monitoring of print images comprises the following steps:

- electro-optical detection and digitization of a REAL image in individual pixels,
- use of a reference image that is segmented into a plurality of segments such that the segments respectively exhibit a specific color property, whereby a reference value describing the color property is associated with the pixels arranged in the respective segment,
- comparison of the color property of the pixels of the REAL image with the corresponding reference values of the reference image, whereby a corresponding pixel is marked as an error in a result image given a deviation above a predetermined threshold value.

In the invention, a reference image is used that is segmented into a plurality of segments such that the segments respectively exhibit a specific color property. Thus no randomly previously established sub-regions are used, but rather segments that in the reference image respectively comprise a region with an essentially identical color property. The segments thus reproduce the morphology of the image. Given this special design of the segments, significantly more precise reference values can be used than is the case in conventional methods in which the sub-regions have been randomly established.

In the inventive method, the pixels of the REAL image are thus compared with a very precise reference value, whereby deviations can be very reliably detected.

Color properties in the sense of the following invention can, for example, be grey values and/or color values.

In particular a real-time monitoring of print images is possible with the invention.

According to a preferred method, boundary regions of the segments are not considered upon comparison of the pixels of the REAL image with the corresponding reference values of the reference image, whereby small register